

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004556**Date Inspected:** 03-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1800**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Chung Fu-Kuan**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower, Deviation and Jacking Saddles**Summary of Items Observed:**

On this date OSM Quality Assurance (QA) Representative Daniel L. Reyes was present during the welding of the structural steel components regarding the Tower Saddles relative to this project. The following was observed:

**Fabrication Shop # 4**

At the start of the shift the QA inspector traveled to the shop to observed the scheduled work performed on the casting stem and rib on the Tower Saddle identified as T1-1. The weld build-up was performed on the casting stem and rib which were identified as 7Y-8U utilizing the Welding Procedure Specification (WPS) SJ-3012-1-1. The WPS was also used by the Intertek Testing Service (ITS) Quality Control (QC) Inspector Chung Fu-Kuan as a reference during QC verification of the Alternating Current (AC) welding parameters. The SMAW process was performed by JSW welding personnel Takatoshi Inowe ID 08-5163 with the tower saddle positioned so that the performance of the welding was in the flat position with the work in the horizontal plane and the weld metal deposited from above.

The 5.0 diameter consumable utilized by the JSW welding personnel appeared to be a Hobart Brothers Product and the trade name was identified as LB52-A which appeared to comply with the AWS Specification A5.1 and the AWS Electrode Classification E7016.

Later in the shift this QA inspector observed, at random intervals, the QC inspector performing QC verification of the welding parameters, the minimum preheat and maximum interpass temperatures.

The QA inspector's observations were performed at random intervals during the shift. The QA inspector noted that it appeared the approved and latest revised WPS's were posted at the welding station and that each approved welder was entered in the latest revised Welding Personnel Log issued by Japan Steel Works, Ltd. The welding

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parameters, preheat and interpass temperatures were verified by the QA inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempilstik temperature indicators were utilized during the verification of the heat control. The filler metal utilized by the JSW welding personnel was also verified. The QC inspector ITS personnel, Chung Fu-Kuan appeared to perform the visual weld examinations, monitoring of the welding and the verification of the welding parameters in accordance with the contract documents.

See Weld Joints in Progress Inspected, below, in regards to QA observation of the welding parameters recorded during this shift on this date.

The following digital photographs illustrate the observations of the activities performed on this date.



| Item | Weld Identification | Applicable WPS | CWI Name   | Amperage | Voltage | TravelSpeed | Preheat Temp   | Remarks |
|------|---------------------|----------------|------------|----------|---------|-------------|----------------|---------|
| 1    | 7Y-8U               | SJ-30-12-1-1   | C. Fu-Kuan | 255 AC   | 24.5 AC | 170mm/m     | 180 Degrees C. | Inowe   |

## Summary of Conversations:

There were no pertinent conversations relative to the project on this date.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

|                      |             |                             |
|----------------------|-------------|-----------------------------|
| <b>Inspected By:</b> | Reyes,Danny | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Lanz,Joe    | QA Reviewer                 |